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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/605,394	Applicant(s) HOFFMAN ET AL.	
	Examiner Stephen Gravini	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-22 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1-2, 6-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Dossaji et al. (US 5,961,698). Dossaji is considered to disclose the claimed invention comprising:

an air dryer **10** including a manifold **16** or **20** and a desiccant cartridge **12** wherein said manifold includes a threaded portion **14**, **18**, or **30** for connecting to said desiccant cartridge;

a bore **32**, **33**, **42** or **36** running through said manifold; and

a fastener **14**, **18**, or **30** disposed in said bore, wherein air flow passing through the air dryer intersects the bore and communicates to an external purge volume, wherein said fastener connects said air dryer manifold to the external purge volume wherein the purge volume is considered to be the volume of exhausted fluid from either manifold as discussed in column 4 lines 4-29. The claimed "purge volume" is broadly and reasonably construed from the specification to include the disclosed airflow particularly discussed in column 4 line 19 of that reference. Dossaji is also considered to disclose the claimed reservoir which houses said purge volume, wherein said fastener connects said air dryer to said reservoir at column 4 line 40, wherein said assembly is used in connection with a commercial vehicle air brake system at column 1 line 39, wherein said desiccant cartridge contains a set of threads which are used to

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thread the cartridge onto a set of corresponding threads located on said manifold at column 3 line 49, and a reservoir including a first passageway **36** for transmitting first dried compressed air between said air dryer and the purge volume and a second passageway **42** for transmitting second dried compressed air between said dryer and a downstream component, the second dried compressed air being transmitted between the air dryer and the downstream component without passing through the purge chamber.

Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Shamane et al. (US 5,607,500). Shamane is considered to disclose the claimed invention comprising:

a manifold **68**, wherein said manifold includes a bore **104** for insertion of a mounting fastener **85** or **84** and a threaded portion **84** or **85**; and

a spin-on desiccant cartridge **12**, which connects to said threaded portion of said manifold (please see column 4 lines 23-35),

wherein said manifold bore communicates air between the air dryer and a purge volume, and wherein said mounting fastener connects said air dryer manifold to the purge volume (please see column 4 lines 31-46); or alternatively:

a manifold **68**;

a desiccant cartridge **12** mounted on a threaded portion **85** or **84** of said manifold (please see column 4 lines 23-35); and

a fastener **84** or **85** disposed within a bore running through said manifold;

wherein said fastener is secured to an outer surface of an enclosed reservoir **70**. Shamine is also considered to disclose the claimed bore is in communication with an air flow path in said air dryer (column 4 lines 64-67) and a purge volume disposed within said reservoir and means for prohibiting rotation of the air dryer (column 4 lines 10-15).

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Blevins et al. (US 5,595,588). Blevins is considered to disclose the claimed invention comprising:

aligning an air dryer with a reservoir such that one or more stabilizing mechanisms interlock to prevent rotation of the air dryer relative to the reservoir (please see column 4 lines 17-35 wherein the recited "reservoir" is broadly and reasonably construed from the specification to include the disclosed cartridge **12** or body assembly **14** since a reservoir, cartridge, or body assembly are all designed to receive a supply or reserve fluid consistent with applicants' specification and Blevins' teachings);

inserting a fastener through the manifold and into a threaded member in the reservoir (please see column 3 lines 35-50); and

tightening said fastener to said reservoir (please see column 4 line 35).

Claims 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mahoney et al. (US 6,094,836). Claim 15 is treated in light of the prior art assuming that the claimed invention is enabling. Claim 16 is treated under the assumption that 35 USC 112 sixth paragraph is invoked (from the means for recitation) since all the elements of MPEP 2181 appear to satisfy invoking that statute. Mahoney is considered to disclose the claimed invention comprising:

delivering a flow of air to an air dryer manifold with a desiccant bed canister attached to a threaded portion of said manifold (please see column 3 line 59 through column 4 line 7 and column 4 lines 31-58);

passing said flow of said air through the desiccant bed, thereby drying the air (please see column 6 lines 40-50);

delivering the dried air to a set of downstream components; (please see column 8 lines 18-23);

purging the desiccant bed with a purge flow from a purge volume to regenerate the desiccant bed (please see column 7 lines 18-26); and

exhausting said purge flow after it has passed through said desiccant bed (please see column 6 lines 51-63);

wherein said purge flow passes from said purge volume via a bore in said manifold in which a fastener securing said air dryer to the vehicle is disposed (please see column 5 lines 17-21 wherein when read in conjunction with figure 2, it can be seen that numerous fasteners are disposed securing the dryer such as fasteners **150** washer, **152** valve, **154** rubber valve, or **162** threaded neck portion); or alternatively:

an air dryer including a manifold **124** (wherein the broadly claimed manifold includes valve assembly since applicants' specification supports an element with a central bore for purge flow in paragraph [0005] while other embodiments include valves in paragraph [0026]) and desiccant cartridge **45** connected to a threaded portion **56** of said manifold; and

a means **106 & 170** (wherein the disclosed lower housing **106** is secured in place by fasteners **170** for securing an air dryer to an air reservoir as shown in figure 2) for securing said air dryer to an air reservoir, wherein said air reservoir includes a purge volume;

wherein means for securing said air dryer includes a means for communicating air between said air dryer and said purge volume and a fastening means disposed within said means for communicating air between said air dryer and said purge volume, said fastening means securing said air dryer to said air reservoir (please see column 4 line 59 through column 5 line 16).

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Yandell (US 1,993,201). Claim 18 is also treated under the assumption that 35 USC 112 sixth paragraph is invoked (from the means for recitations) since all the elements of MPEP 2181 appear to satisfy invoking that statute. Yandell is considered to disclose the claimed invention comprising:

an air dryer **1**;

a single means **2** for securing said air dryer to an outer surface of an enclosed purge reservoir; and

a means for preventing rotation of the air dryer when said air dryer is secured to the purge reservoir (please see right side of column 7 lines 1-8).

Claim Rejections - 35 USC § 103

Claims 3-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dossaji in view of Shamane. Dossaji is considered to disclose the claimed

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invention, as discussed above under the anticipatory rejection, except for the claimed means for stabilization and rotation prevention. Again since the means plus function language is used (i.e. means for stabilizing), it may be construed that section 112, sixth paragraph of the patent statute is invoked since the elements of MPEP 2181 are considered satisfied for invoking that statute. Shamine, another air dryer, is considered to disclose means for stabilization and rotation prevention at column 4 lines 10-15. It would have been obvious to one skilled in the art to combine the teachings of Dossaji with the means for stabilization and rotation prevention, considered disclosed in Shamine, for the purpose of providing a locking and retention feature. Furthermore, Dossaji is considered to disclose the claimed invention, except for the claimed thread measurement. It would have been an obvious matter of design choice to recite a claimed thread measurement since the teachings of Dossaji would perform the claimed invention regardless of the thread measurement.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable Zoglman et al. (US 5,427,609). Zoglman is considered to disclose the claimed invention comprising:

an air dryer **10** including a manifold **14** and desiccant cartridge **100**, the manifold secured to a vehicle by a fastener **18**; and

an anti-rotation mechanism **24** that prevents rotation of the air dryer when said air dryer is secured to the vehicle. Zoglman is considered to disclose the claimed invention except for the single fastener embodiment. Please refer to figures 2-4 wherein fastener **18** is connected to bracket **24** and further fasteners **18** are attached to

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the periphery of the air dryer. It would have been an obvious matter of design choice to provide a single fastener since the prior art teachings show that the claimed invention would perform substantially the same function, using substantially the same means in substantially the same way with substantially the same result regardless of the claimed number of fasteners.

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yandell in view of Zoglman. Yandell is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed second fastener anti-rotation mechanism. Zoglman, another air dryer, is considered to disclose a second fastener anti-rotation mechanism at column 4 lines 42-63. It would have been obvious to one skilled in the art to combine the teachings of Yandell with the second fastener anti-rotation mechanism, considered disclosed in Zoglman, for the purpose of securing and mounting an air dryer.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoglman. Zoglman is considered to disclose the claimed invention comprising:

an air dryer **10** including a manifold **14** and desiccant cartridge **100**; and

an enclosed reservoir **16**, wherein said air dryer is coupled to the outside of the reservoir, wherein said reservoir includes a mounting bracket **24** that is coupled to a rail **23** of a commercial vehicle, said rail of a vehicle having a height. Zoglman is considered to disclose the claimed invention, except for the claimed height percentage. It would have been an obvious matter of design choice to recite a claimed height

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percentage since the teachings of Zoglman would perform the claimed invention regardless of the height percentage.

Response to Arguments

Applicant's arguments filed August 4, 2005 have been fully considered but they are not persuasive.

anticipation

Applicants assert that the claim 1 amended purge volume makes clear its external relation to the dryer. However as discussed in the rejection above, each of the claimed components is considered to be fully anticipated by the primary reference Dossaji because each component is supported by the teachings of Dossaji. It is also argued that claim 1 requires that the fastener connect to the manifold to the external volume, however this requirement is not claimed. The claimed manifold including a threaded portion for connecting to a desiccant cartridge is a statement of intended use which is not "required" for connection as asserted. The Dossaji anticipation rejection is considered proper and therefore maintained.

Current Office practice affords interpreting claims under the broadest reasonable construction in light of the specification. With respect to claims 10 and 11, applicants argue that those claims contain both a fastener and a threaded portion, which is not disclosed in primary reference Shamine. To those skilled in the art, a fastener is an example of a device that connects other devices. Examples would be a bolt or screw, such that these examples would be both a fastener and threaded device, since a threaded bolt or a threaded screw can be used to connect components such as a

cartridge onto a manifold. The Shamane anticipation rejection is considered proper and therefore maintained.

By applicants own admission, Blevins discloses interlocking tabs to prevent rotation between the claimed reservoir components disclosed as either a cartridge or body assembly in Blevins. The Blevins anticipation rejection is considered proper and therefore maintained.

Applicants argue that a fastener securing an air dryer to a vehicle is not disclosed in Mahoney with respect to claim 15. However applicants acknowledge that Mahoney discloses venting water/vapor line as shown in figure 2 of that reference. Further analysis of that figure and supporting text shows that numerous fasteners (please see the claim construction for fastener above) used to secure the air dryer to the vehicle. The Mahoney anticipation rejection is considered proper and therefore maintained.

Applicants assert that the claimed manifold and means for securing are not anticipated by the Mahoney teaching of valve assembly **124** and means **106** for securing with respect to claim 16. The valve assembly **124** of Mahoney anticipated the claimed manifold because current Office practice guides claim construction such that a recited claim element is given its broadest reasonable interpretation in light of the specification. In this case the claimed "manifold" is specified as an element with a central bore for purge flow in applicants' specification paragraph [0005] while other embodiments include valves [0026]. By applicants' own specification a manifold includes valves. The valve assembly disclosed in Mahoney expressly anticipates the

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claimed manifold since both include valve embodiments. With respect to applicants means plus function language, the disclosed lower housing **106** is secured by fasteners **170** which is considered to meet the claimed means for securing because both are securing means. Applicant admits that Mahoney teaches that the construed manifold valve assembly provides an inlet for air into the dryer of that teaching, which shows that the disclosed valve assembly **124** expressly anticipated the claimed manifold.

Applicants attempt to give a narrower meaning to the claims is not considered to overcome the prior art teachings of Mahoney. The Mahoney anticipation rejection is considered proper and therefore maintained.

Applicants argue that Zoglman can not anticipate the claimed invention because a single fastener for securing a manifold is not disclosed. However since that reference does not expressly disclose a single fastener but rather a plurality of fasteners, it would have been obvious to one skilled in the art to provide a single fastener as discussed above in the rejection. The amended claim necessitated a new grounds of rejection since claim 17 has been amended such that the intended use is now a structural limitation.

Applicants have amended the claims to include a statement of intended use and argue that the intended use overcomes the anticipatory rejection of claim 18 over Yandell. However the structure of Yandell is such that regardless if the dryer used for drying wet articles or dry articles, both intended uses are considered to be inherently disclosed by that reference because both can be used for drying wet or dry fluids. The Yandell anticipation rejection is considered proper and therefore maintained.

obviousness

Applicants argue that the claimed means for stabilization and rotation prevention feature is not found in secondary reference Shamine with respect to claims 3-5 and 8. Applicants assertion is that the claims should be given a narrower meaning than is well known in the art. In the Shamine reference, a locking feature is provided when bolt 112 is installed within the tube 110. This locking feature is considered to obviate primary reference Dossaji because locking provides means for stabilization and rotation prevention. The Dossaji in view of Shamine obviousness rejection is considered proper and therefore maintained.

Applicants assert that since the Zoglman anticipatory rejection is overcome, so should the Yandell in view of Zoglman obviousness rejection should be overcome. Applicants also argue non-analogous art, but both inventions are related to the field of air drying. The secondary reference was not cited to show every element of the claimed invention but rather it would have been obvious to one skilled in the art to combine the references. Zoglman is considered to obviate the claimed invention and therefore the obviousness rejection of Yandell in view of Zoglman is considered proper and therefore maintained.

It is not clear that applicant has amended claim 21 to overcome the obviousness rejection of Zoglman, since that reference shows an enclosed reservoir with an air dryer coupled to its outside. Zoglman is considered to obviate the claimed invention and therefore the obviousness rejection of Zoglman is considered proper and therefore maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on 571 272 4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SMG

September 21, 2005

A handwritten signature in black ink, appearing to read "Stephen Tharvin". The signature is written in a cursive, flowing style.